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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/254,005	03/01/1999	TAKAFUMI ATARASHI	Q53451	6345

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WASHINGTON, DC 20037

EXAMINER

KRUEER, KEVIN R

ART UNIT	PAPER NUMBER
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1773

25

DATE MAILED: 04/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/254,005

Applicant(s)

ATARASHI ET AL.

Examiner

Kevin R Kruer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 October 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 3 and 5-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13 is/are allowed.
- 6) ☒ Claim(s) 1, 3, and 5-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1. Claims 11 and 12 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The examiner cannot find support in the original specification for an embodiment in which the consolidated particles were used for either (a) a glass having optical anisotropy or (b) a filter reflecting light having a specific angle.

Support for the polarizer (claim 13), the capacitor (claim 10), and the magnetic material (claim 9) can be found in the "Industrial Applicability" section of the specification (page 29).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3, 5, 7, 9, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beane et al (US 5,453,293). Beane teaches a particle including a

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first material coated with a second material (abstract). The first and second materials may be metal or non-metal (abstract). A plurality of particles, including the coated particles, can be consolidated to form an article (abstract). As seen in FIG 11, the particles may be consolidated such that they are three dimensionally arranged at the same distance from one another in a given direction and are united into said consolidated material while maintaining the same distance in a given direction. The core particle may comprise copper, tungsten, molybdenum, graphite, diamond, nickel, or KOVAR (col 10, lines 50+). NOTE: KOVAR is magnetic. The particle may further comprise a pre-coat of 200- several thousand angstroms between said coating and said particle (col 9, lines 8+ and FIG 10).

Beane does not teach the claimed thickness of the coating. However, Beane does teach that the properties of the particle will vary approximately linearly with respect to the ratio of the volume of coating to the volume of particle (col 4, lines 32+). Thus, it would have been obvious to one of ordinary skill in the art to vary the coating thickness in order to obtain the desired particle properties.

With respect to claim 9, the examiner takes the position that Beane reads on said claim when KOVAR is utilized as the particle, and an oxide is utilized as the coating (col 10, lines 59+).

With respect to claim 10, the examiner takes the position that the particle of Beane reads on said claim because the base particles taught in Beane are electrically conductive. The preamble limitation "capacitor" implies only that the consolidated material must be conductive. The pre-coat meets the "plural" coating limitation.

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3. Claims 1, 3, 6-8, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Paszkiet et al (US 5,716,552). Paszkiet teaches a thick film conductive paste composed of metallic particles coated with a ceramic layer that reduces leaching and solder diffusion into the conductor (abstract). The particle may further comprise a second coating of a metallic coating (FIG 3b, col 2, lines 43+). The coatings may be continuous or discontinuous (col 2, lines 56+). The ceramic layer may comprise alumina or zirconia, both of which are known in the art as dielectrics (col 4, lines 21+). As seen in FIG 4, the particles are consolidated in a three-dimensionally arrangement such that the particles are the same distance from one another in a given direction and are united such that the said distance is maintained.

Paszkiet does not explicitly teach the claimed thickness of the coating layers. However, Paszkiet teaches that the ceramic layer is utilized to provide a barrier to the leaching of metal from the particle (col 4, lines 17+). Furthermore, the metallic layer promotes conductivity (col 4, lines 36+). Both conductivity and barrier properties are known in the art to be proportional to thickness. Thus, it would have been obvious to one of ordinary skill in the art to vary the thickness of each layer in order to obtain the desired conductivity and barrier properties, respectively.

With respect to claim 10, the examiner takes the position that the coating of Paszkiet reads on said claim because the base particles taught in Paszkiet are electrically conductive. The preamble limitation "capacitor" implies only that the consolidated material must be conductive.

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Allowable Subject Matter

Claim 13 is allowable over the prior art.

Response to Arguments

The rejections of Paper #14 have been overcome in light of the Declaration filed by Dr. Atarashi on October 21, 2002.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin R Kruer whose telephone number is 703-305-0025. The examiner can normally be reached on Monday-Friday from 7:00a.m. to 4:00p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Thibodeau, can be reached on (703) 308-2367. The fax phone number for the organization where this application or proceeding is assigned is 703-305-5408.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

K-RK-

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Paul Thibodeau
Supervisory Patent Examiner
Technology Center 1700